

## **ABSTRACT OF THE DISCLOSURE**

An implantable medical device with a main processor also has a telemetry processor to perform some telemetry processing functions resulting under some circumstances in reducing demands on the main processor, conserving energy, increasing telemetry processing speed, and many other advantages. A wide variety of implantable medical devices can be configured with a telemetry processor including neuro stimulators, pacemakers, defibrillators, drug delivery pumps, diagnostic recorders, and cochlear implants. The telemetry processor includes control logic, a data decoder, a receive buffer, a data encoder, and a transmit buffer. Methods of receiving messages and transmitting messages with a telemetry processor are also disclosed.